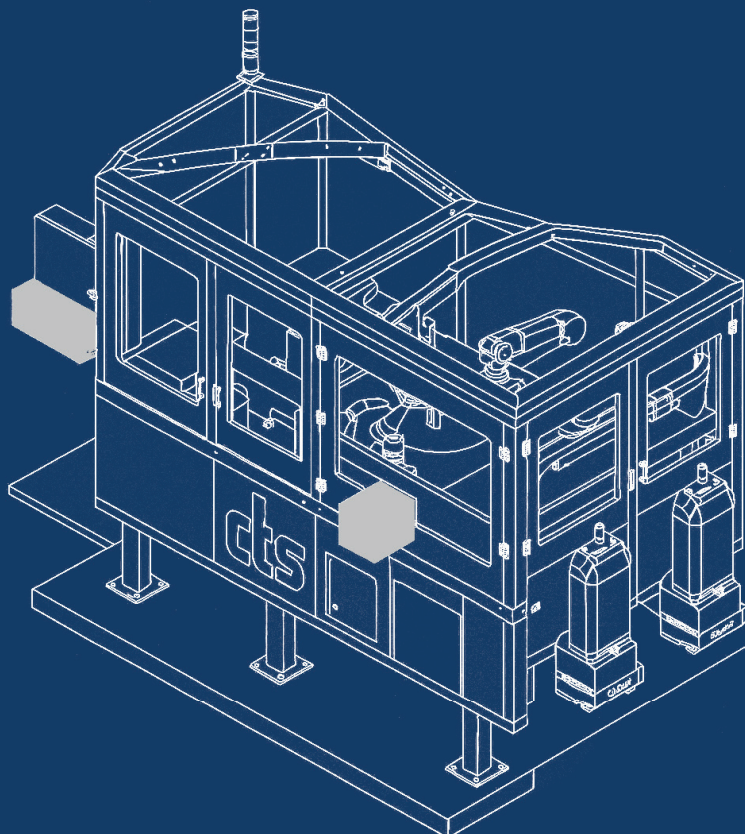




Your path to a Smart Semicon Fab begins with Automation & Quality.

Introducing targeted automation for critical steps - such as wafer handling, FOSB & FOUP packing, traceability, and intralogistic transport - designed to create a foundation for precision-driven, high-efficiency manufacturing that also suits your cyber security needs.



Semiconductor automation - designed for the fab floor.

Moving toward a Smart Semicon Fab means solving practical production challenges at their source. Whether it's cleanroom handling, packing consistency, or limited operator availability - our targeted & customized automation solutions improve your process control, scale with your needs, and keep your line aligned with future demands.

Your advantages: Scalability, throughput, real-time insights



Secure your independence

Our solutions fulfill your specific needs and processes



Strengthen competitiveness

Flexible systems enable quick adjustments to market changes to increase your added value



Optimize costs

Efficient technologies lower material and energy costs through data transparency



Cleanroom-ready handling

Automates transfers without compromising environmental control



Synchronized automation

Aligns with your cycle times, not against them



Minimal footprint

Engineered for tight fab layouts and retrofit scenarios



Reliable transfers

Delivers wafers and carriers to the right step - on time, every time

No room to fail? That's the point.

We understand the concerns that come with automating critical semiconductor processes. What if a system doesn't integrate cleanly into your fab? What if it adds complexity instead of solving it? That's why Smart Semicon Fab solutions from cts are engineered for real environments - with the interfaces, process logic, and support your team actually needs.

You're not investing in experimental automation. You're implementing proven, production-ready tools for wafer handling, FOSB/FOUP packing, and cleanroom storage - built to run in tact, validated for traceability, and backed by documentation and service from day one through the machine lifecycle.

Instead of expanding manual workarounds, you free up operators for value-driving tasks. Instead of scaling with people, you scale with precision.

You're not just installing new hardware. You're building a stable, compliant, and future-focused fab environment - ready for higher volumes, tighter margins, and greater expectations.

Get in touch with us via our website form



How do you overcome today's fab-floor challenges?

From tighter regulations to the pressure for higher yield, semiconductor fabs are under constant strain to deliver with precision, traceability, and speed. Smart Semicon Fab solutions address these challenges directly:

- » **As a production lead**, you manage complex handovers between process steps—often with manual systems that slow throughput, introduce variation, and delay cycle completion.
- » **As a decision-maker**, you're cautious about investing in automation that disrupts existing workflows or demands major reengineering.
- » **As a systems engineer or IT lead**, the integration of new hardware into legacy MES or tool control systems feels high-risk, especially under cleanroom constraints.

Our Smart Semicon Fab offering automates these high-stakes workflows with cleanroom-ready, SECS/GEM-compatible systems designed specifically for wafer fabs. Whether you're handling FOSBs, polishing / lapping wafers, or transferring between process tools, each solution is built to fit - not fight - your existing environment.

More process stability. More traceability. More control.

From automated carrier handling to validated packing and tracked FOSB / FOUP storage - our systems help you stabilize cycle time, reduce operator load, and meet audit requirements without extra effort. Our Smart Semicon Fab ensures your fab stays fast, compliant, and ready for what's next.



The cts Group delivers automation that transforms wafer production - precise, proven, and built for your fab floor.

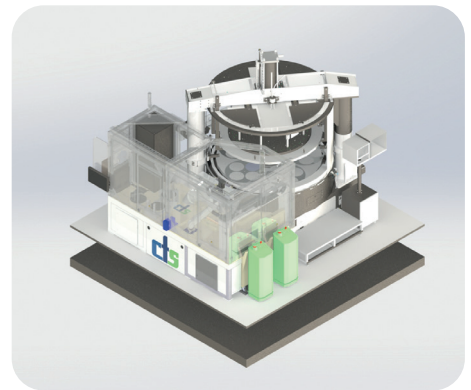
Apollu: Automated Handling for Polishing and Lapping Processes

The challenge on the market

Manual wafer handling during polishing and lapping increases the risk of surface defects, misalignment, and contamination - impacting both yield and cycle time.

The result of automation

Apollu automates wafer loading and unloading with high-precision camera guidance - eliminating manual contact and stabilizing cycle time. It integrates into existing lapping, SSP and DSP setups regardless of machine vendor, supports multiple wafer sizes, and meets ISO 7 cleanroom requirements. The result: fewer handling errors, higher process reliability, and measurable relief for fab operators.



- ✓ Camera-based positioning prevents wafer damage
- ✓ Fast loading and unloading with a <20-second cycle time
- ✓ Supports various wafer sizes and machine types

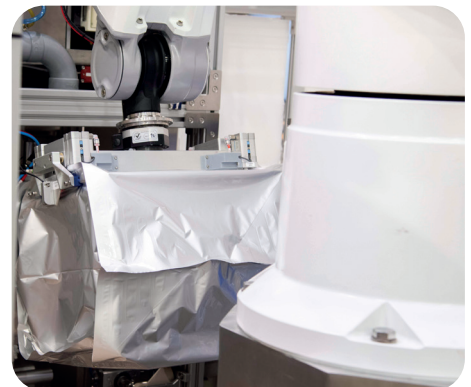
ABT: Fully Automated Packing Solution for FOSBs & FOUPs

The challenge on the market

Manual handling increases the risk of contamination, incorrect labeling, or misassigned carriers. Even small errors at this stage can lead to damage or delays in downstream processing.

The result of automation

ABT automates the complete packing process with reliable precision - from code-based identification to cross-slot checks, leak testing, and labeling. Every step is validated, every unit is traceable, and all data is transferred in real time via SECS/GEM. The result: safer handling, accurate labeling, and consistent packing quality - without the manual overhead and without the need of setup task between different packaging recipes.



- ✓ Protection for wafers through 100% leak testing
- ✓ Minimal cycle times, handling up to 270 FOSBs per day
- ✓ Cross-slot checks for precise quality control

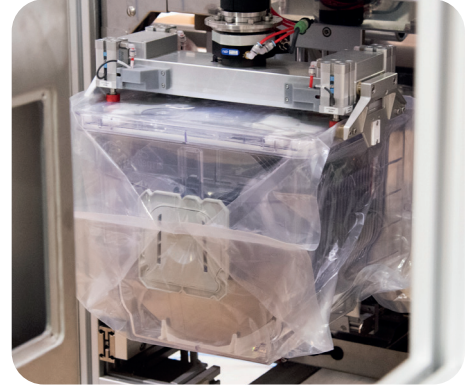
MBT: Semi-Automatic Packing for Smaller Batches

The challenge on the market

Non-standard packing tasks still require the same cleanliness and precision as high-volume production but often lack the infrastructure to support them efficiently.

The result of automation

MBT bridges the gap between manual effort and automated control. By combining operator input with automated packing, carrier positioning, and container adjustment, MBT brings process stability even to variable lot sizes. Its cleanroom-compatible design, and low barrier to entry make it ideal for fabs that need flexibility without sacrificing quality. The result: repeatable packing - even for one-offs -with less effort and greater confidence.



- ✓ Semi-automatic processes reduce investment costs
- ✓ Intuitive manual input for all requirements
- ✓ Space-saving integration into production environments

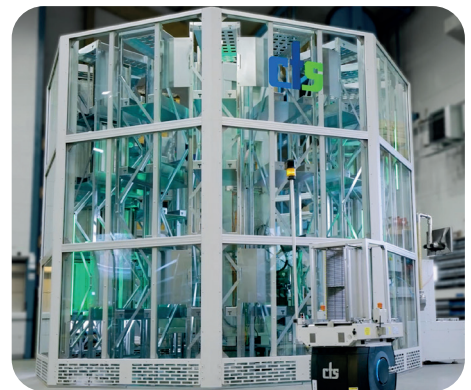
Smart Warehouse / Mini: Optimal Storage of FOSB, FOUP & Co.

The challenge on the market

Space is limited, manual retrieval is time-consuming, and standard warehouse systems are rarely suited for semiconductor materials.

The result of automation

Smart Warehouse / Mini brings order and efficiency to compact storage environments. With automated inbound/outbound handling, container tracking, and cleanroom-ready design, it streamlines material flow without demanding additional space. Modular and scalable, it grows with your fab's needs while maintaining strict environmental and process standards. The result: faster access, fewer errors, and full visibility - even in the smallest footprint.



- ✓ Dynamic connections for inbound & outbound intralogistics
- ✓ Tracking & tracing for accuracy in real-time
- ✓ Seamless integration into existing fab layouts

**We make your Semicon Fab
future proof.**

Get in touch with us via
our website form



Smart Warehouse / Big: Maximum capacity for FOSB, FOUP & Co.

The challenge on the market

Conventional storage solutions struggle to keep pace with the speed and precision the market now expects

The result of automation

Smart Warehouse / Big ensures uninterrupted supply to your process tools - even at peak load. With automated storage and retrieval, dynamic slot allocation, and seamless system integration, it manages high-volume container logistics with speed and consistency. The scalable architecture adapts to your fab's growth, while space-optimized layouts maintain cleanroom standards. The result: less downtime, better material availability, and a production line that moves as fast as your roadmap.



- ✓ Manage 400 to 2900+ units (FOSB, FOUP, Wafer Carriers)
- ✓ Integration with efficient OHT material transport systems
- ✓ Space-saving with advanced gripper technology

Optimized flow - for wafer fabs that can't afford to wait.

The role of material logistics in high-volume semiconductor manufacturing

Efficiency in semiconductor production isn't just about tool performance - it's about ensuring wafers, carriers, and containers are in the right place, at the right time, in the right condition. Whether you're ramping up or running steady-state, uncoordinated material flow introduces risks: missed cycle times, tool idle time, contamination, or batch delays.

Cleanroom-compatible storage, automated handovers, and traceable movement aren't extras - they're operational necessities in today's fabs. Optimizing flow means minimizing human error, stabilizing cycle time, and building systems that grow with your line - not against it.

Why cts is the right partner for the fab floor of tomorrow

We don't just move containers - we stabilize processes. With cts, you get more than automation. You get systems engineered specifically for wafer fabs: smart storage that adapts to your space constraints, cleanroom-ready handovers for FOUPs and FOSBs, and modular platforms that deliver full traceability and SECS/GEM integration. Every solution is built around your cycle time, layout, and compliance requirements - so your production stays focused, not interrupted.

Get in touch with us via our website form



Phone: +49 (0) 8679 91689-110
Mail: sales@group-cts.com
Web: www.group-cts.com



How we stand out from the competition

Smart Manufacturing expertise - with semiconductor specialization

- ✓ Focus on a wide range of electronics production from SMT to wafer-level handling
- ✓ Built specifically for semiconductor fabs within the broader Smart Manufacturing offering
- ✓ Cross-industry know-how, applied with semiconductor-grade precision

Cleanroom-compatible automation from day one

- ✓ Systems are designed to meet ISO 7 cleanroom requirements without retrofitting
- ✓ Wafer-safe packing, handling, and storage minimize risk in sensitive environments
- ✓ Clean integration ensures process integrity from start to finish

Modular, scalable, and built for phased implementation

- ✓ Automation solutions scale with production needs - from test lots to high-volume fabs
- ✓ Modular systems allow step-by-step deployment without halting your line
- ✓ Flexible transport modules adjust to layout and demand changes

Seamless integration into existing fab ecosystems

- ✓ Native support for SECS/GEM, MES platforms, and AMR interoperability
- ✓ Whether one station or entire flows - cts builds around your process, not against it
- ✓ Less downtime, faster validation, and real-time data from day one

One partner from design to support

- ✓ cts delivers the full stack: storage, packing, transport, software, and service
- ✓ One contact point across all project stages - no finger-pointing between suppliers
- ✓ Long-term support and upgrade paths ensure your fab keeps pace with what's next



cts GmbH competence for technical solutions
Fuhrmannstraße 10
D - 84508 Burgkirchen a. d. Alz

Phone: +49 (0) 8679 91689-110
Mail: sales@group-cts.com
Web: www.group-cts.com

